REMARKS

Claims 1-10 are pending in the application. Claims 1 and 10 have been amended by the present amendment. The amendments are fully supported by the application as originally filed (see, e.g., specification at page 24, 2nd paragraph to page 29, 2nd paragraph; and page 35, 2nd paragraph).

As amended, independent claims 1 and 10 recite an image forming apparatus in which a sheet eject mechanism moves from an initial position to a sorting position with a sheet held therein, and then after ejecting the sheet to a receiving tray, moves from the sorting position to the initial position **without** a sheet held therein (see, e.g., specification at page 35, 2nd paragraph: "after ejecting a recording sheet at the sorting position Pf or Pr, is made to be able to move back to the initial position Pc before the next recording sheet is transported.")

The sheet eject mechanism of the Applicants' claimed invention moves between an initial position and a sorting position. First, the sheet eject mechanism catches hold of a first sheet in the initial position. Next, with the first sheet held therein, the sheet eject mechanism moves to the sorting position and ejects the first sheet there. Then, the sheet eject mechanism returns to the initial position within a transport interval between the first and second sheets, and catches hold of the second sheet in the initial position. As claimed, the sheet eject mechanism ejects a sheet in the sorting position, and therefore does not hold any sheet when returning from the sorting position to the initial position.

According to the Applicants' invention, the sheet eject mechanism must return to the initial position as soon as possible in order to catch hold of the second sheet. However, if the sheet eject mechanism starts to return to the initial position immediately after ejecting the first sheet, it is possible that the sheet eject mechanism may contact the first sheet during its fall onto the receiving tray, and thus cause a sheet stacking problem.

To overcome the above-described sheet stacking problem, the Applicants' claimed sheet eject mechanism includes a control device for determining a delay time required for the sheet eject mechanism to start to return to the initial position after ejecting a sheet to the receiving tray, the delay time being calculated based on a difference in length between a transport interval that varies according to sizes of sheets being processed and time that it takes the sheet eject mechanism to move back from the sorting position to the initial position (see, e.g., specification at page 31, last paragraph to page 32, 2nd paragraph).

Claims 1-10 were rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 6,113,094 to Horiguchi et al. ("Horiguchi") in view of U.S. Patent 6,445,891 to Shiraishi. This rejection is respectfully traversed.

The proposed combination of Horiguchi in view of Shiraishi does not teach or suggest an image forming apparatus in which a sheet eject mechanism moves from an initial position to a sorting position with a sheet held therein, and then after ejecting the sheet to a receiving tray, moves from the sorting position to the initial position **without** a sheet held therein.

In the Final Office Action of 01/10/2006, it was admitted: "Horiguchi et al. does not teach the sheet eject mechanism which moves between an initial position and a sorting position and the control device [for] regulating a delay time required for the sheet mechanism moving from the initial position to the sorting position or other position" (see page 2, last paragraph).

The Shiraishi reference was cited allegedly for teaching "a control device (CPU) 31 which regulates a delay time for the sheet eject mechanism which moves from a position to other position via the initial sensor 26, the timing sensors 25, 38 and an offset motor 37" (Final Office Action at page 2, last paragraph).

However, Shiraishi does not teach or suggest an image forming apparatus having a sheet eject mechanism in which after ejecting a sheet at a sorting position, the sheet eject mechanism returns from the sorting position to the initial position **without** a sheet held therein.

Referring to FIGS. 5A-5F of Shiraishi, a copy sheet P is pinched by discharge rollers 21 in an "initial position" (see column 5, lines 59-61; FIG. 5A). Then, a moving element 22 moves from the initial position to an "opposite position," where the sheet P is discharged into a discharge tray 3 (see column 5, line 62 to column 6, line 5; FIGS. 5B and 5C). Next, a second copy sheet is pinched by the discharge rollers 21 placed at the opposite position, and the moving element is moved from the opposite position to the initial position with the second copy sheet being held therein (see column 6, lines 21-34; FIGS. 5D-5F). In other words, the moving element 22 moves from the initial position to the opposite position while holding a sheet, and moves from the opposite position to the initial position while holding a sheet.

In Shiraishi, the "initial position" and the "opposite position" are both sorting positions to perform offset stacking. Shiraishi does not teach or suggest an image forming apparatus in which after ejecting a sheet at a sorting position, the sheet eject mechanism returns to an initial position **without a sheet held therein**. In Shiraishi, a sheet is always held in the moving element during movement between the "initial position" and the "opposite position."

Moreover, in Shiraishi, there is no teaching or suggestion of a control device for determining a delay time required for a sheet eject mechanism to start to return to the initial position after ejecting a sheet, at least because the moving element 22 in Shiraishi does not need to return to the initial position in time to receive a second sheet.

In Shiraishi, after ejecting a first sheet in the "initial position" or the "opposite position," the moving element 22 does not need to return to the "opposite position" or the "initial position," respectively, in time to receive a second sheet. Nor does the moving element 22 need to wait for the ejected first sheet to fall a sufficient distance from the moving element 22 before the moving element 22 starts to return to the "opposite position" or the "initial position." This configuration of Shiraishi does not involve determining a delay time for a sheet eject mechanism to start to return to an initial position from a sorting position based on a difference in length between a transport interval that varies according to sizes of sheets being processed and time that it takes the sheet eject mechanism to move back from the sorting position to the initial position (see, e.g., claim 1).

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,

Date: June 28, 2006

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